

WHAT IS CLAIMED IS:

1. A recording/reproducing apparatus for recording data in a recording medium and reproducing the data therefrom, comprising:

measuring means for measuring first data relative to said recording/reproducing apparatus;

first memory means for storing second data to make a decision as to an abnormal state of the measured first data;

data generating means for generating third data relative to maintenance of said recording/reproducing apparatus on the basis of the first and second data; and

output means for delivering the third data as an output.

2. The recording/reproducing apparatus according to claim 1, further comprising a laser diode for recording data in the recording medium and/or reproducing the data therefrom, wherein the first data include a forward current value of said laser diode; the second data include the initial forward current value of said laser diode, and also data indicating the ratio of the forward current value to the initial forward current value for making a decision as to the service life of said laser diode; and said data generating means

generates, from the first and second data, the third data relative to the service life of said laser diode.

3. The recording/reproducing apparatus according to claim 1 for, by the use of the laser beam of said laser diode, recording data in the recording medium and reproducing the data from said recording medium, wherein said measuring means measures the accumulated emission time of a laser beam from said laser diode; the first data include the accumulated laser beam emission time of said laser diode measured by said measuring means; the second data include the mean time to failure of said laser diode; and said data generating means generates, on the basis of the first and second data, the third data relative to the service life of said laser diode.

4. The recording/reproducing apparatus according to claim 3, wherein said measuring means measures the accumulated laser beam emission time of said laser diode in accordance with the operation mode of said laser diode.

5. The recording/reproducing apparatus according to claim 4, wherein the accumulated emission time measured by said measuring means when writing the data in said recording medium is longer than the accumulated emission time measured when reading the data from said recording medium.

6. The recording/reproducing apparatus according to claim 1, further comprising second memory means for storing the output value of a temperature sensor obtained at a predetermined temperature, wherein the first data include temperature data, and said measuring means measures the temperature by comparing the present output value of said temperature sensor with the prerecorded output value of said temperature sensor obtained at said predetermined temperature and stored in said second memory means.

7. A method of detecting the internal state of a recording/reproducing apparatus which records data in a recording medium and/or reproduces the data therefrom, said method comprising the steps of:

measuring, as first data, the internal state of said recording/reproducing apparatus;

acquiring second data from a memory for detecting that the first data indicate an abnormal value;

generating, from the first and second data, third data relative to maintenance of said recording/reproducing apparatus; and

delivering the third data as an output from said recording/reproducing apparatus.

8. The state detecting method according to claim 7

TOP SECRET 5054250

in the recording/reproducing apparatus which records data in the recording medium by the use of a laser beam emitted from a laser diode, and/or reproduces the recorded data from said recording medium, wherein the first data are measured by accumulating the emission time of the laser beam from said laser diode, and the third data are generated by comparing the second data, which represent the service life of said laser diode, with the first data.

9. The state detecting method according to claim 7 in the recording/reproducing apparatus which records data in the recording medium by the use of a laser beam emitted from a laser diode, and/or reproduces the recorded data from said recording medium, wherein the first data include the result of measuring the forward current of said laser diode; the second data include the initial forward current value of said laser diode, and also the rate of the forward current value, which is used for making a decision as to the service life of said laser diode, with said initial forward current value; and the third data relative to the service life of said laser diode are generated from the first and second data.

10. A recording/reproducing apparatus for recording data in a recording medium and/or reproducing

the recorded data therefrom, comprising:

measuring means for measuring first data that indicate the state of said recording/reproducing apparatus;

first memory means for storing second data to make a decision as to any abnormal state of said recording/reproducing apparatus; and

output means for delivering the first and second data as an output to another information processor.

11. The recording/reproducing apparatus according to claim 10 for writing data in the recording medium by the use of a laser beam emitted from a laser diode and/or reading the data from said recording medium; wherein the first data include data for calculating the forward current value of said laser diode; and the second data include the initial forward current value of said laser diode, and also the ratio of the forward current value, which is used for making a decision as to the service life of said laser diode, with said initial forward current value.

12. The recording/reproducing apparatus according to claim 10 for writing data in the recording medium by the use of a laser beam emitted from a laser diode and/or reading the data from said recording medium; wherein said

measuring means measures the accumulated emission time of the laser beam from said laser diode, and the second data include data indicative of the mean emission time to failure of said laser diode.